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REMARKS

The present Response and Amendment is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Applicants assert that the present invention is new, non-obvious and useful. Favorable reconsideration and allowance of the application is respectfully requested.

Status of Claims

Claims 1, 2, 4, 6-8, 11, 12, 14-16, 20, and 22-25 are pending in the application. Claims 1, 4, 12, 14, 20 and 22 have been amended.

Claims 3, 13 and 21 have been canceled without prejudice or disclaimer. In making this cancellation without prejudice, Applicants reserve all rights in these claims to file divisional and/or continuation patent applications.

The amendments to the claims add no new matter.

Telephone Interview Summary

Applicants thank the Examiner, Jacob Andrew Petranek, for granting and attending the telephone interview with Applicants' representative, Caleb Pollack, Reg. No. 37,912, and Michal Moav, on March 29, 2007. During the interview, Applicants' representatives discussed with the Examiner amendments to the independent claims. The Examiner agreed these amendments would make the claims allowable over the prior art of record, if antecedent basis issues discussed during the interview were corrected. These amendments are reflected in the amendments above.

CLAIM REJECTIONS

35 U.S.C. § 103(a) Rejection Based on Reinman and Giacalone

In the Office Action, the Examiner rejected claims 1-2, 6-8, 11-12, 15-16, 20 and 23-25 under 35 U.S.C. § 103(a), as being unpatentable over Reinman et al., "Optimizations Enabled by a Decoupled Front-End Architecture" ("Reinman") in view of U.S. Patent No.

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6,272,624 to Giacalone et al. ("Giacalone"). Applicants respectfully traverse this rejection of claims 1-2, 6-8, 11-12, 15-16, 20 and 23-25 under 35 U.S.C. § 103(a), as being unpatentable over Reinman in view of Giacalone in view of the remarks that follow.

According to M.P.E.P. § 2142, in order to establish a *prima facie* case of obviousness, the prior art references must teach or suggest all the claim limitations.

Without conceding the appropriateness of the combination, Applicants respectfully submit that neither Reinman nor Giacalone, alone or in combination, teach or suggest all the limitations of independent claims 1, 12 and 20 as amended, and therefore a *prima facie* case of obviousness cannot be established by the Examiner with respect to amended claims 1, 12 and 20.

Applicants' independent claim 1 as amended includes, *inter alia*, "determining if data stored in entries of the first side or the second side of a cache of a branch predictor indicates that a branch is to be taken by either of the entries; the cache being segmented into the first side and the second side, where entries on the first side correspond to a set of addresses having even-numbered indexes, and entries on the second side correspond to a set of addresses having odd-numbered indexes". Applicants' independent claims 12 and 20, as amended include, *inter alia*, that a "branch prediction unit comprises a cache whose entries are segmented into a first side and a second side, where entries on the first side correspond to a set of addresses having even-numbered indexes, and entries on the second side correspond to a set of addresses having odd-numbered indexes"

Neither Reinman nor Giacalone, alone or in combination, disclose a branch prediction unit including a cache whose entries are segmented into a first side and a second side, where entries on the first side correspond to addresses having even-numbered indexes, and entries on the second side correspond to addresses having odd-numbered indexes as is required in Applicants' independent claims 1, 12 and 20, as amended.

Therefore, Applicants respectfully request that the rejection of claims 1, 12 and 20 under 35 USC §103(a) as being obvious over Reinman in view of Giacalone be withdrawn.

Each of claims 2, 6-8, 11, 15-16 and 23-25 depends, directly or indirectly, from one of independent claims 1, 12 and 20, and includes all the features of the claim from which it depends as well as additional distinguishing features, and is therefore likewise allowable.

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In view of the above, applicants respectfully request that the rejection of claims 1-2, 6-8, 11-12, 15-16, 20 and 23-25 under 35 USC §103(a) over Reinman in view of Giacalone be withdrawn.

35 U.S.C. § 103(a) Rejection Based on Reinman, Giacalone and Stiles

In the Office Action, the Examiner rejected claims 3-4, 13-14 and 21-22 under 35 U.S.C. § 103(a), as being unpatentable over Reinman in view of Giacalone and further in view of U.S. Patent No. 5,515,518 to Stiles et al. ("Stiles"). Applicants respectfully traverse this rejection of claims 3-4, 13-14 and 21-22 under 35 U.S.C. § 103(a), as being unpatentable over Reinman in view of Giacalone and further in view of Stiles in view of the remarks that follow.

As discussed above, independent claims 1, 12 and 20 as amended, are allowable over Reinman and Giacalone. Stiles does not cure the deficiencies of Reinman and Giacalone. Each of claims 4, 14 and 22 depends, directly or indirectly, from one of independent claims 1, 12 and 20, and includes all the features of the claim from which it depends as well as additional distinguishing features, and is therefore likewise allowable.

Claims 3, 13 and 21 have been canceled and therefore the rejection of these claims is now moot.

In view of the above, Applicants respectfully request that the rejections of claims 3-4, 13-14 and 21-22 under 35 USC §103(a) be withdrawn.

Conclusion

In view of the foregoing amendments and remarks, the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Response and Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Aside from the fees for the petition for extension of time and RCE, being requested

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separately, no fees are believed to be due associated with this paper. However, if any additional fees are due, please charge such fees to deposit account No. 50-355.

Respectfully submitted,

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